A PLAN OF EDUCATION FOR A YOUNG PRINCE.

By the Chevalier *RAMSAY*, Author of *The Travels of* CYRUS.

To which is added,

A THOUGHT relating to EDUCATION,

Offer'd to the Examination of such as have Noblemen and Gentlemen (from the Age of Eight to Twelve, *aut circiter*) under their Care.

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A

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PLAN of EDUCATION, &c.

IN the preſent State of human Nature, all our Faculties are weaken'd and obſcur'd, our Underſtanding is over-clouded with Ignorance and Error, our Imagination clogg'd with groſs and groveling Ideas, our Will biaſs'd by ſtrong and turbulent Paſſions. True Education is the Art of curing the Diſeaſes of the Mind, ſo as to reſtore in ſome degree our decay'd Faculties to their primitive Vigour. 'Tis then that the Underſtanding diſcovers great and noble Truths, that the Imagination paints them forth in a thouſand agreeable Shapes, that the Heart attaches itſelf to them, and becomes amiable in loving them. Thus we re-inſtall in their different Functions the *Philoſopher*, the *Painter* and the *Lover*, of which our Spiritual Nature ſeems to be compoſed. The principal End then of all publick and private Inſtruction, ſhould be to ſtrengthen the Judgment, to wing the Fancy, and to purify the Heart.

I. *Of the Underſtanding.*

The Cuſtom of Publick Schools has prevail'd ſo much, and ſucceeded ſo well, that it were imprudent and even dangerous to attack the Methods there us'd of employing the firſt Years of our tender Age in acquiring Languages. The Wiſdom of the Ancients is no doubt beſt learnt, when they are read in their own Tongue, and all Tranſlations ſerve only to degrade them. An exact

Knowledge of *Greek* and *Latin* are therefore the Foundations of all true Learning. But ſince youthful Minds are capable very early of Reaſon and Compariſon, I believe, that to neglect the Improvement of the Underſtanding, in order to cultivate the Imagination and Memory, is to lay the Foundations of a falſe and ſuperficial Knowledge. Hence it is, that Men of polite Learning only are ſeldom Men of a profound Genius. They can unriddle the Grammatical Intricacies of *Pindar* and *Perſius*, yea perhaps ſhew with Elegance and Taſte the different Beauties of *Homer* and *Virgil*; but then they have no Reliſh of Truth, they can neither riſe up to firſt Principles, nor deſcend to Conſequences, nor purſue a continued Chain of Ideas, thro' all its various Links and Windings.

I humbly therefore conceive, that it is a very great Fault, not to awaken early the Activities of the Mind in Children, in order to ſtrengthen their intellectual Powers. The following Plan is what I would propoſe for the Education of a Prince, who may one Day govern a Nation whoſe Genius is equally proper for Learning and War, and who loves a King that can direct its Councils by his Wiſdom, as well as defend its Intereſts by his Courage.

After a tolerable Knowledge of *Greek* and *Latin*, 'tis fit to begin with the Study of Mathematicks, becauſe theſe Sciences habituate the Underſtanding by degrees to Penetration, Depth, and Attention, which enable it at length to reaſon cloſely, clearly, and ſtrongly, upon every thing that becomes the Object of its Reflection. The firſt five Books of *Euclid*'s Elements are the beſt Foundations of all Mathematical Learning. The Ancients had a wonderful Knowledge of human Nature, they ſaw the Extent and Bounds of our Underſtanding, the gradual

gradual and ſlow Steps that were to be made at firſt in theſe abſtracted Sciences, till the Mind accuſtom'd to a Train of ſucceſſive Reaſonings begins to enlarge its Faculties, extend its Views, and accelerate its Pace. After that the Pupil has laid in a ſufficient Stock of Geometrical Principles, the Tutor ſhould proceed to give him ſome Taſte of Algebra, Fluxions and the Doctrine of Curves. Great Care however is to be taken not to perplex and exhauſt the Force of youthful Minds by thoſe nice and quaint Speculations; becauſe, if Caution be not us'd, they are as dangerous in Mathematicks, as the Refinements of the Schoolmen were in Philoſophy. So ſoon, therefore, as the young Prince is ſufficiently initiated into theſe Myſteries of the ſublimer Geometry, he muſt be taught to apply all to the Knowledge of Nature and its Operations.

The skilful Tutor muſt begin by ſhewing his Pupil the wiſe Inſtitution of the firſt Laws of Motion; how they are the voluntary Eſtabliſhments of an Intelligent Cauſe, and not the neceſſary Effects of a blind Force. He may then proceed to a general Survey of the principal Secrets and beautiful Diſcoveries of Natural and Experimental Philoſophy, wander over our Globe with Pleaſure, and diſcover the Cauſes of the great Phenomena that appear on the Earth, in the Air, and among the celeſtial Bodies. Here the Mind begins to taſte the Fruits of all its laborious, abſtracted Speculations, and to perceive how the ſublimer Geometry contributes to explain the celeſtial and terreſtrial Appearances, according to the Principles of the great Sir *Iſaac Newton*. Theſe Principles may be reduc'd to a few Propoſitions, all the reſt are but fine Silk-webs ſpun from the prolifick Brain of that ſurprizing Genius, or perhaps Defects of

Method, Perſpicuity and Elegance, which the moſt Part of profound Men ſeldom or never apply themſelves to.

To prevent the Mind's being abſorpt in theſe Speculations, and to detach it from an over-weaning Opinion of its own Abilities, the following Principles are to be taught.

1. That the Creation is but an Image or Picture of the divine Perfections, and therefore bears a Character of his Infinity and Immenſity. That this ſmall Part of it which we inhabit, is but a Point, in compariſon of the Solar Syſtem; that the Solar Syſtem is but a Point, in compariſon of the vaſt Spaces diſcover'd in the Regions of the fixt Stars; that theſe ſuperior Regions themſelves are but a Point, in compariſon of the innumerable Worlds that lie perhaps hid in the Boſom of Immenſity.

2. That in this Point which we inhabit, we know only ſome ſuperficial Qualities and Properties of Nature in ſo far as is neceſſary for our preſent State, Conduct, and Uſes. That, as Sir *Iſaac Newton* ſaid, all the Diſcoveries Mortals can make are like theſe of a Child upon the Borders of the Sea, that has only crack'd ſome Pebbles, and open'd ſome Shells, to ſee what is in them; while there lies beyond him a boundleſs Ocean of which he has no Idea: That we can never be true Philoſophers, till we ſee the Author of Nature Face to Face; compare the Pictures with their Original; and know by direct Intuition their mutual Relations and Reſemblances; all which are the Privileges only of pure Intelligences diſengag'd from Matter.

3. That the Cauſe of Attraction, and all the other wonderful Phenomena of Nature depend upon the Action of an ethereal Fluid that pervades

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all Things: That as the infinite Spirit, preſent every where, acts upon all intelligent Natures, and gives them at once both Being and Well-being, ſo this ethereal Fluid is like the Senſorium of the Deity, by which he acts upon all material Beings, as our Body is the Medium, by which our Soul acts on all Objects that ſurround us. This ſeems to be the true Meaning of the Orientals, the *Egyptians* and *Pythagoricians*, when they conſider'd the Divinity as the Soul of the World, and this ethereal Fluid, purer than Light it ſelf, as the Body of God.

By theſe great Ideas the Mind will be elevated and dilated, and at the ſame time preſerv'd from that little Vanity which puffs up vulgar Souls. It will deſpiſe all thoſe imaginary, dark and impious Syſtems, that tend to explain Nature by blind mechanical Springs, without the continual Influence and Action of a ſoveraign intelligent Cauſe: And in fine, it will look upon this Ball of Clay as a Priſon, conceive a noble Indifference for Life, be inſpir'd with high Thoughts of Immortality, and chearfully ſubmit to the Decrees of Heaven when Death comes to diſ-engage us from the Entanglements of Matter and Senſe.

II. *Of Imagination.*

While the Reaſon is thus cultivated and improv'd, the Sciences that depend upon Imagination ought not to be neglected. The pleaſing Images of Poetry, the agreeable Fictions of Mythology, the pathetick Diſcourſes of Eloquence, ſerve to amuſe youthful Minds, enliven their Fancy, and to poliſh the Taſte. In reading with them *Homer* and *Virgil*, *Sophocles* and *Terence*, *Demoſthenes* and *Cicero*, *Anacreon* and *Horace*, they ſhould be taught the

the masculine Strokes and the finer Shades of the *Grecian* and *Roman* Paintings; the different Genius and Ornaments of Prose and Verse; the Nature, Rules and various Characters of Epick, Dramatick, and Lyrick Compositions. By all these the Pupil will learn, that the true Foundations of Stile are strong Thoughts, noble Sentiments and lucid Order; that no Images are to be allowed, but what are natural, and proper to each Subject; that all false Delicacies, affected Antitheses, Epigrammick Points, and *Italian* Conceits, are to be avoided in the true Sublime. He must first Think, then Feel, and Words will naturally follow.

The Studies, however, of Poetry, Mythology, and Antiquity, must be carry'd much higher than what is done ordinarily in the Schools. In reading the Poets and Classical Authors, the Prince must be taught to discover in them the great Principles of Theology and Morality, that are oft hid under the Allegories and Fictions of the Ancients, according to the Principles of *Pythagorean* and *Platonick* Philosophy, which are as follow.

1. That the supreme and eternal Mind has produced numberless Orders of intelligent Natures which repleniſh all the boundless Regions of Immensity: That Moral and Physical Evil can't be the first Production of the sovereign Good; that therefore all Beings were at first created in a State of Purity and Happiness, which is called by the Orientals, the *Egyptians*, and *Greeks*, the Reign of *Oromosis*, *Osiris*, and *Saturn*, or the Golden Age.

2. That a certain Portion of these Spirits fell from their Original Purity, and were condemned to inhabit mortal Bodies, the Frame of Nature was alter'd in the little Orb which they inhabit, and they were subjected to Physical Evil and Sufferings, to punish and purify them from their moral Corruption.

ruption. This State is call'd by the Ancients the Reign of *Arimanius*, *Typhon*, and the *Iron Age*.

3. That at length these degenerate Beings will be restor'd to their primitive Perfection and Happiness, call'd the Restoration of the Golden Age, and the Reign of *Astrea*.

Upon these great Ideas depend all the Fictions of Mythology, and prepare the Mind to relish the nobler and sublimer Doctrines of Christianity. Can any one observe the profound Genius discover'd in the Ancients, the Sublimity of their Geometers, the Sagacity of their Historians, the noble Morality found in their Philosophers, and imagine they understood, in a literal Sense, all they say of their Gods and Goddesses? The present Contempt of reveal'd Religion comes for the most part from confounding the pure, genuine, original Doctrines, with the vain Speculations and Glosses of the Schoolmen. As the Heathen Poets and Philosophers degenerated by degrees from the true Theology, so have the Christian Divines of all Communions departed in many Things from the true Spirit of Religion.

III. *Of the Heart.*

While the Understanding and the Imagination are thus strengthen'd and polish'd by a due Mixture of philosophical and classical Learning, the Morals are to be perfected, and such Sciences taught as give us a true Knowledge of God, of ourselves, and of our Fellow-Creatures.

1. The Study of Nature, and all the Marks of infinite Power, Wisdom, and Goodness diffus'd thro' the Universe, give us a great Idea of its Author. By these we discover, according to the Expression of the Ancients, the infinite Skill of the

the first and soveraign Geometer, who created and disposed all Things with Order, Measure, and Proportion. This is the Use that is to be made of Mathematicks and Natural Philosophy.

To the Study of Poetry should be joyn'd that of the three Acts of Imitation. The Ancients represented the Passions by Gests, Colours, and Sounds. Hence came Dancing, Painting and Musick. *Xenophon* tells us of some wonderful Effects of the *Grecian* Dances, and how they mov'd and express'd the Passions. We have now lost the Perfection of that Art; all that remains is only what is necessary to give a handsome Action and Air to a young Gentleman. This ought not to be neglected, because upon the external Figure and Appearance depend often the Regard we have to the Internal Qualities of the Mind. A graceful Behaviour in the House of Lords and Commons commands the Attention of a whole Assembly.

A Taste of Painting is not to be neglected; it is a Sort of Poetry to the Eyes. We have scarce any Remains of the ancient Painting; but the *Grecian* Statues, Cameos and Entaglios preserv'd to this Day, were the Models that *Raphael* and all the great Painters studied. Of these ancient Statues and modern Pictures, Drawings or Prints may be had, and should make sometimes the Amusement of a young Prince. He may be shewn therein the fine Imagination of the Painter, the beautiful Symmetry and Composition of the Parts, the noble and genuine Expression of Nature both Animate and Inanimate, the Connection of the Design, and the wonderful Effects of Light and Shade.

A Relish of Musick elevates and refines the Soul, and serves as a pretty Amusement to the Intervals of Business. I have no Skill of it myself,

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and therefore ſhall not decide of it. The *Italians* no doubt excel in the Diverſity and artful Contexture of Sounds, but I have heard ſay that they now ſtudy more to pleaſe the Ear than to paint Nature. Whereas the ancient *Greeks* ſurpaſs'd in both Variety and Expreſſion. Great Care, however, is to be taken, that the young Prince don't yield himſelf up to theſe Amuſements. Nothing is more dangerous, and nothing incapacitates a Man more for Buſineſs. If theſe acceſſory Accompliſhments be made the End of Study, young Gentlemen become Men-triflers, loſe their Taſte of the ſublimer Sciences, and even for the great Duties of Life. 'Tis rather a Taſte than a thorough Skill in theſe Amuſements, that becomes a Prince and a Man of Quality.

But then the Mind of a young Prince, improv'd and fortified by theſe rational Sciences, ought not to ſtop at the Proofs of a Deity drawn from material Nature, and the viſible Creation. He ſhou'd be taught to enter into himſelf, and conſult the Idea of Infinity, which we can never baniſh from our Minds, and that ſeems congenial to our ſpiritual Natures.

By this he will ſoon ſee, that all we can conceive of the firſt Being may be reduc'd to three Attributes, of Power, Wiſdom, and Goodneſs; that he is the Life, Light, and Love of all Intelligent Beings; that they receive from him at every Moment their Being, their Reaſon, and their Felicity; that he could create them for no other End, but to make them eternally happy in the Contemplation and Love of his Infinite Perfections.

2. By theſe ſublime Ideas of the divine Nature, we will ſoon find in ourſelves, and in all Beings that ſurround us, manifeſt Characters of Moral and Phyſical Evil, of ſtrong Paſſions that contra-

dict Reaſon, and inevitable Sufferings that hinder our compleat Happineſs, and thus have a clear invincible Demonſtration from the Idea of God and the Knowledge of our own Nature, that we are degenerated and fallen from our firſt original Purity. That the ſoveraign Good being more intimately preſent to our Souls, than ever we are to ourſelves, we ought in all Times and on all Occaſions to lay open our ſuperior Faculties to his pure and intellectual Influences, that ſo he may reſtore our laps'd Powers to their primitive Health, and Strength, make us imitate his divine Perfections, and transform us into his Likeneſs. By this vital and central Converſion of the Soul to its firſt Principle, we will come to a true Knowledge of ourſelves, deſcend more and more into our ſpiritual Natures, diſcover all the Foldings and Windings of Self-Love, ſee the Impurity of common and falſe Virtues, learn by degrees to riſe above our ſelves and all created Natures, and be prepared upon the Diſſolution of this mortal Body, to be re-united to our Source and Center. Thus we will be equally preſerv'd from Incredulity and Superſtition, from Irreligion and Enthuſiaſm, the Soul will bring forth, as *Plato* ſays, not the Shadows of Virtue, but the Virtues themſelves, becauſe we will look upon nothing as ſuch, but what tends to exalt our Intelligent Natures to purify the Heart, and divinize the Soul. We will learn to diſtinguiſh betwixt the Religion of the Means and that of the End, the Forms and the Eſſence, the Subſtance and the Ceremonies, and thus riſe above all the little Prejudices and Paſſions of Sect and Party.

3. From thoſe ſame Principles derive all the moral and ſocial Duties both of private and publick Life. We will become true, juſt and good, from a deſire of imitating the ſoveraign Truth, Juſtice

Juſtice and Goodneſs. By this noble Love of Truth we will learn not only all that Candor, Uprightneſs and Sincerity that hinder us from contradicting by our Words and Actions, what we think and feel; but we will acquire all that noble Simplicity of Heart, which makes us ſpeak Truth when neceſſary, tho' detrimental to our Intereſts, and injurious to our Self-love. By this inward Principle of Juſtice, we will not only give to every Man what is his Due, as to the civil Rights that may be exacted by political Laws, but as to his natural Rights, where there is no poſitive nor human Authority that can conſtrain us. We will do Juſtice to other Men's Talents, Virtues, and good Qualities, notwithſtanding Party, Country, and all the Differences in Religion or Politicks. We will know how to diſtinguiſh and honour true Merit, tho' many Errors and Imperfections attend it. Finally, by an Imitation of the God-like Virtue of Goodneſs, we will acquire not only an univerſal inward Beneficence, Generoſity, and diſintereſted Good-nature, but alſo that outward Politeneſs and Delicacy of Manners which expreſſes itſelf by a noble Freedom and Eaſineſs far remov'd from the everlaſting Ceremonies of an importunate, formal and never-ceaſing Civility.

4. From the ſame Source flow all the great Maxims of Politicks and Government. We will look upon Mankind as one great Republick, of which God is the common Father and Prince, and every Kingdom as a particular Family of that univerſal Republick. Hence ariſes the eternal, immutable Law of Nature and Nations, antecedent to all fictitious, original Contracts betwixt King and People. This Law is, that in all Times, Places, and Circumſtances, the Good of the Many is to be prefer'd to that of the Few, and

publick to private Intereſt. We ought not to ruin our Families in order to gratify our own Paſſions, nor injure our Country to enrich our Family, nor invade the Rights and Privileges of Mankind to aggrandize our Country. Tho' Preſervation of Self be our firſt Duty, yet it ought not to be our only Love. We ought to take a more particular Care of our ſelves, and thoſe Beings to whom Nature has immediately ty'd us, becauſe our Capacity of doing Good is narrow and circumſcribed; yet we ought to prefer general to private Intereſt, becauſe our Capacity of loving Good is boundleſs.

5. It will follow from theſe ſame Principles, that the Love of Order is very compatible with the Love of Liberty, and that we ought to have an equal Horror for all levelling, anarchical Principles, as well as for deſpotick arbitrary Maxims. On the one hand, tho' it were true that all Power reſided originally in the People, yet it does not thence follow that they have a Right to retake it when they think themſelves injured by the Legiſlature. By this Principle all Governments might be unhing'd, ſince proud, ambitious, bold, and turbulent Men, may very oft aſſemble a Mob, pretend they are the major Part of a Nation, and that therefore they have a natural inherent Right of judging for themſelves, independent of all regular Authority and Laws. To admit ſuch Principles, is to change true Liberty into a wild Licentiouſneſs, precipitate all Nations into a State of Anarchy, and to expoſe Mankind to become Savages, where Force alone prevails. Such Maxims can proceed only from a perfect Ignorance of human Nature, and of the Corruption of our Species, of which the moſt Part can only be govern'd by Obedience and Fear, and not by Rea-

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ſon or Perſuaſion. Beſides, by the Nature of Things, there muſt be in all Governments a ſupreme, abſolute, fix'd, and viſible Authority, whether it be lodg'd in one, in few, or in many. Since the Men to whom this Authority is, and muſt be intruſted, are fallible, therefore all Governments, however perfect in Speculation, will be imperfect in Practice. The Thrones and Dignities, to which Kings and Princes are exalted, ſhew their Faults in a more conſpicuous Manner than private Life. Sometimes by the uncertain State of human Affairs, the ſmalleſt Miſtakes of the beſt Monarchs, have dreadful Conſequences, which they could not foreſee. It is, therefore, more conſiſtent with Humanity, the publick Good, and the true Love of our Country, to ſuffer ſmall Grievances from a lawful Government, than to unhinge it altogether, deliver up the Multitude to their own Furies, and embroil a Nation in Civil Wars.

On t'other hand, Kings and Princes may paſs the Bounds of their Authority, reverſe the End of all Governments, and bring a Nation to Ruin by their Tyranny and Oppreſſion. They may, inſtead of being the living Images of the moſt High, become the Votaries and Vicegerents of the Devil; to ſay there are no Bounds to be ſet to ſuch Licentiouſneſs, is to ſtake down Men's Minds to the vileſt Slavery, and loſe all Taſte of true Liberty, the nobleſt Prerogative of our reaſonable Natures. Here to teach the Paraſitical Principles of an unbounded paſſive Obedience, is equally cruel to Monarchs, and to Mankind. Princes ſhould be taught on the contrary, that to give their Will for a Rule, is to uſurp the Rights of the Divinity, and invade the Privileges of human Fraternity: That they have no Right to

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act againſt the eternal and immutable Law of univerſal Good; that Reſiſtance and Rebellion will be neceſſary Conſequences of Oppreſſion and Tyranny, becauſe when Monarchs ſet no Bounds to their Authority, it will overflow, and hurry all before it into Confuſion and Anarchy. Tho' the Hereditary Right of Crowns and Dominions ſeem to be founded upon a Civil Law, much like that of Lands and Eſtates; tho' the one was deſtin'd to bridle Ambition, as the other to curb Avidity; tho' the *Salick* Law is, perhaps, one of the wiſeſt Inſtitutions of a Nation; yet theſe Maxims ought to be concealed from a young Prince, and eſpecily an *Engliſh* one. He ſhould be taught on the contrary, that the univerſal, free, unbrib'd Conſent of the States of a Kingdom, is what gives in each Generation the true Right to Crowns: The Hereditary Right was never exactly obſerv'd in *England* for many Generations together. Theſe Maxims will be true Spurs to a noble and generous Mind; all other Principles may ſerve only to corrupt it by falſe Ideas, and inhuman Paſſions.

It is as impoſſible to prevent the two Extreams of Anarchical and Monarchical Frenzy, when either a pamper'd People become inſolent, or when ambitious Princes are ſpirited by Flattery; as to bid a foaming Ocean become calm, or a raging Lion gentle. Hence have proceeded all the Diſeaſes, Revolutions, and Cataſtrophes of the political Body in all States and Ages. The Conſtitution of *England* ſeems to be the moſt adapted to prevent theſe Inconveniencies. The States of the Nation, aſſembled in Parliament, ſeem to be the beſt Bridles of the Multitude and of Kings; but becauſe human Nature is weak and imperfect, this excellent Conſtitution may be ſpoil'd and corrupted by Bribery, Faction, and Prejudices. The true Method

thod of preventing ſuch Corruptions, is by the Education of young Princes. All other Methods may ſtop the Effects, for a Time, but they can't alter the Cauſe, nor dry up the Source; and this was what induc'd the great Monſ. *de Fenelon*, Archbiſhop of *Cambray*, to write his *Telemachus*. Some ſuperficial Minds look upon his Maxims as impracticable and chimerical, tho' they really inſpir'd them into a young Prince, who gave all Reaſons to believe, that he would have follow'd 'em, had he lived.

The laſt and great Study of a Prince is that of Hiſtory; and this indeed ſhould be the principal Amuſement of his Life. 'Tis there he will learn not only the Cauſes of the Riſe and Fall of Monarchies, the Defects and Advantages of all the different Forms of Government, but alſo the Characters of Men, the Sport of human Paſſions, the Contraſt of their Virtues and Vices, the periodical Returns of their Errors and Follies, and ſo to ſpeak the true Anatomy of Man. 'Tis with this View he ought to read Hiſtory, and not barely to ſtore his Memory with Facts, in order to ſhine in Company. He ſhould know the Hiſtory of his own Nation, and of the neighbouring Kingdoms, whoſe Annals interfere with ours. He ought above all to apply himſelf to the Study of what has paſs'd ſince the Treaty of *Munſter*, becauſe before that Time the Ballance of Power was not ſettled in *Europe*.

Whoever follows this Method, will have a true Idea of the Order of Sciences, and not place the ſubaltern Ones in the Rank of the Principal. He will make what is uſeful in Medals, Geography, and Chronology, ſubſervient to Hiſtory, and Hiſtory to Politicks, and Politicks to the Good of his Country. Again, he will look upon Mathematicks,

ticks, Natural Philoſophy, and Metaphyſicks, as ſubſervient to Morality and Religion, and ſo concenter all his acquir'd Talents in the Knowledge of God, himſelf, and his Fellow Creatures, as the great and primary Science. By this Means he will never fall into the Abſurdities of falſe Learning, the Whims of a ſuperficial Virtuoſo, nor the Meanneſs of a Pedant, but acquire all the Accompliſhments and Virtues of a true Chriſtian, a good Patriot, and a fine Gentleman.

It is not however to be imagin'd, that this Plan of Education is to be executed in any determinate Number of Years, nor that it can ſucceed with every Genius. Till the Age of Fifteen, a young Gentleman may be habituated to Study ſo as not to diſguſt him; but ſet Hours of Application are not always the moſt uſeful Moments. A skilful Tutor can inſtruct, correct, and improve by a Look, by a Word, by a Tale ingeniouſly told. At a Table, at a Play, in Walking, he may inſpire the Love and Taſte of great Thoughts, noble Sentiments, and a true Delicacy of Manners. That his Education may be carry'd on till Twenty without his being importuned by the formal Leſſons, ſtudy'd Speeches, and tedious Moralizing of a grave, ſolemn, and pedantick Monitor.

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A THOUGHT RELATING TO EDUCATION.

A

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TO THE INSTRUCTORS OF YOUTH.

Gentlemen,

WHAT I have to offer in the following Pages is not by Way of Inſtruction, a thing I am more ready to receive from, than preſume to give to my Superiors; but a modeſt Hint, which may, I hope, without any Offence, be ſuggeſted, in a reſpectful Manner, by an Inferior, to thoſe much above him in Knowledge and

Learning: When 'tis considered that this Intimation being delivered in a Book in few Hands, almost universally neglected, it can be no Wonder that it should be unknown to Scholars, that Men of Reading should be unacquainted with it. The Thought is borrowed from an Essay (wrote many Years ago by Bishop Wilkins) *towards a real Character, and Philosophical Language: Now 'tis frankly own'd that the Attempt of this Author, for the establishing a real Character, and bringing it into common Use, amongst the several Nations of the World, however Ingenious, is a meré Speculation, a vain and chimerical Project: And the Performance has been look'd upon accordingly, met with an answerable Reception, and has had the Fate to be undervalu'd and despis'd; the just Prejudice against the main Scope and Design of the Writer bringing the whole Work into Disregard and*

Contempt:

Contempt: Thus the World has lost that Benefit from it, which by a discreet and judicious Use thereof, it might very probably long before this Time have reap'd. My Business in this short Essay is to endeavour to illustrate that; and to shew, that had the Tables, the ingenious Speculator fram'd as a Ground-work for his real Character, and Philosophick Language, been apply'd to the Instruction of Youth, a better Foundation for the Knowledge, not only of Words, but Things, might have been lay'd, than hath yet been done by any Way of Institution hitherto put in Practice. I am sensible in what Manner any thing New, tho' tender'd with all imaginable Deference and Submission, upon so old an Art, and so well understood as that of instructing Youth, will be receiv'd by the generality of Readers; but the respectful Opinion I have of Gentlemen of Letters and Ingennity,

nuity, inclines me to hope for a different Treatment from you; who will candidly and impartially read, examine, and pass your Judgment on what is with the utmost Respect and Deference entirely submitted to your Decision.

I am, Gentlemen,

Your most Obedient Servant.

A

THOUGHT

Relating to

EDUCATION.

THE Reader will excuſe me for beginning this Diſcourſe with a Recital of the Advantages that (according to my Apprehenſion) will attend this new Method of Inſtitution; when I ingenuouſly acquaint him, that this is done with a Deſign to diſpoſe him to a favourable Attention to the Method it ſelf, the next Thing to be treated on; towards the friendly Reception of which, it can't be thought improper to beſpeak his Candor and good Will. And that what I have to offer may be fully underſtood, and have its due Weight, he is deſired to keep this in his Mind, conſtantly in View while he is reading this Eſſay, this Thought relating to Education, founded on a right Uſe of Biſhop *Wilkin*'s Philoſophical Tables and Dictionary; that the Deſign of that Reverend Author in theſe Tables is to give a regular Enumeration and Deſcription of all kinds of Things and Notions that fall under Diſcourſe: As 'tis his Purpoſe and Endeavour in the Dictionary to explain,

and

and according to their various Significations, give the Meaning of all kinds of Words, or Names of Things. That this Mark which the ingenious Speculator in his elaborate Treatiſe aimed at, may be ſtill preſent to his Thoughts, continually before his Eye. So much by way of Introduction, that the Tract may without Prejudice be read, without Diſadvantage weighed and conſidered.

Now the firſt obvious Advantage that will recommend this methodical Way of Inſtitution is this; that hereby a plain and ſhort Way will be opened for the Attainment not only of verbal but real Knowledge; to which, 'tis thought, this will be found a more direct and readier Courſe, than any that has hitherto been put in Practice, that has yet been taken for the inſtructing and training up of Youth. It can't be deny'd, that the getting and ſettling in our Minds clear and diſtinct Ideas of Things is the firſt neceſſary Step towards Knowledge; it will be own'd that our Knowledge cannot exceed our Ideas and Notions of Things, that where they are imperfect, obſcure, or confus'd, to imagine that our Knowledge ſhould be certain and clear, would be a fooliſh Thought, a vain and groundleſs Expectation; it will likewiſe be granted, that true Definitions, Deſcriptions not unartfully made, are Means no ways improper to convey juſt and adequate Conceptions. And laſtly, it will be confeſſed, that where the Mind that is to be furniſhed with theſe Ideas is weak, the Underſtanding ſmall, and the Capacity narrow; in that Caſe the Method pitched upon, and made choice of for preſenting theſe Materials of Knowledge, in Conformity to the Nature of the Subject, ought to be, at the ſame time, both clear and ſhort. As, I ſay, the

Knowledge

Knowledge of Things ariſes from the Clearneſs and Diſtinctneſs of our Ideas; ſo does the Knowledge of Words, no mean part of Science, from a right Underſtanding of their various Meanings and Acceptations, according to their primary and proper, or their ſecondary and improper Significations.

Now whether the Dictionary be ſo contriv'd as to anſwer that uſeful Part of Initiation, the giving the exact and preciſe Meaning of Words, it becomes not, nor ſhall I take upon me to affirm: Let any Gentleman of the Univerſity ſpend at different Times about twenty Hours in comparing ſeveral Words in the Dictionary with the Tables to which they are referred; and after the Experiment made with Care and Attention, let him be his own Judge of the Performance, and as it ſhall appear to him upon Trial, accordingly let him determine. As the Tables contain a regular Enumeration and Deſcription of all Things and Notions, plac'd according to ſuch an Order, that the bare Diſpoſition and Arraignment of them may help towards, and contribute to the defining them; ſo by this Artifice, this Juxta-poſition of Things ſimilar, that have an Affinity and Relation to, and a mutual Dependance on each other; the Deſcriptions become the plainer and ſhorter, are reduced into a narrow Compaſs, and couch'd in a very few Words; ſufficient however by the help of Method and Order, to determine their primary Significations, to convey the main and principal Ideas. On theſe two Accounts therefore are they the fitter to be apply'd to the Uſe I propoſe, more accommodate and ſubſervient to this Deſign of laying a Foundation for Knowledge in the Minds of young Children; as they exhibit to their Minds clear Ideas, and in a manner adapt-

ed and well ſuited to their Capacity. When I call this Method of Inſtitution a more direct and readier Way to the Knowledge of Things as well as Words, tho' I plainly by that Sentence declare in Favour thereof, and give it Preference to, and a Place above others: I aſſign a Reaſon at the ſame time for this Eſteem, ſhew what moves and induces me to give it this Preference; while it anſwers an End to which other Methods of Inſtruction can contribute very little, are no ways fitted to promote: An End ſo little regarded by the preſent Inſtructors in the Scheme they proceed by, that it ſeems almoſt wholly excluded, and ſcarce even ſo much as intended.

Another and no ſmall Benefit from this new Method will be, that as Ideas and Words are preſented to, and fix'd upon the Mind in a natural Order; that whereas it receives at the ſame time ſuch and ſuch only as have ſome Affinity and Relation to each other; that thoſe betwixt which there is a Congruity, Likeneſs and mutual Dependence, are orderly and in a regular way offered to the Imagination; in conſequence of this methodical Arrangement; as they have been depoſited and plac'd, ſo will they ariſe; not confuſedly (as in others who have ſo received their Ideas) but regularly, and in a manner agreeable to that by which they have been received. They who have been educated in the common Way, according to the ordinary and accuſtomed Forms, are too apt, I am afraid, to fall into the Extravagancies of *Horace*'s Painter and think in the ſame Manner that he drew. A Way then chalk'd out to keep the Fancy in ſome Bounds, and fix that mercurial Quality; to confine the Thoughts within a narrow Compaſs, always upon the Wing, and for rambling; to prevent theſe exorbitant Sallies of the Imagination

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and exclude all vain, wild and impertinent Ideas, and that lays a Foundation for a ſober, clear, regular Courſe of Thinking, ſuch as I preſume this Method of Inſtruction will introduce, where the mental Pictures will be drawn truly, and according to Nature; compos'd of congruous, coherent Ideas, that have a near Relation, Agreement and mutual Correſpondence with one another; an Inſtitution thus helpful to exact Writing, and true Reaſoning, wants only to be try'd in order to be receiv'd and valu'd, by ſuch whoſe Buſineſs has lay in the Employment and Exerciſe of the Mind, the Severity of Study, and the Fatigue of Thinking; who need not be told how laborious, tedious and unpleaſant Compoſition has been rendered to them on this account, and from this Cauſe chiefly; that a vaſt Number of idle, foreign and impertinent Ideas have been continually ariſing in, offering themſelves to, ſolliciting of, and diverting the Mind from Attention to the Subject under Conſideration; the Matter exerciſing their rational and diſcurſive Faculties. A third Advantage I ſhall name with reſpect to the Learner, is, that hereby his Memory will be improv'd and ſtrengthen'd; to which (as we are taught by Experience) nothing can more contribute, prove more ſerviceable, and be of greater Benefit than Clearneſs and Order: The two ſpecial and recommendatory Properties of this new Method, ſo calculated as to be an Auxiliary, and give Aſſiſtance to another Operation of the Mind, that in young Perſons can't be too much promoted and furthered; that, I mean, of Invention, by ſuggeſting proper and pertinent Ideas, in an orderly and methodical way. Nor will the Judgment (whoſe Office and Buſineſs it is to compound and compare Notions of near Affinity and Relation toge-

ther, ſo as to make a right Eſtimate of Things and Conſequences) be left unaſſiſted; but on the contrary, be enabled by the Light it will receive from Clearneſs, Diſtinctneſs and Order, to make Determinations with more Certainty and Exactneſs, nearer Conformity to the Nature of Things, and Agreement to what ſhould be the end of all our Study, the Effect and Reſult of all our Labours and Diſquiſitions, and for the Diſcovery of which that Faculty was given us; I ſay, a more perfect Agreement to Truth itſelf. To all which may be added, that the Pupil having been thus early, and in his firſt Years conſtantly accuſtom'd to Method, he will at length become a Methodiſt himſelf, grow by degrees dextrous in the uſe of thoſe Arms he has daily handled; and by the help of that Art he has been continually exerciſed in, an expert and compleat Artiſt.

The next Thing to be done, is to give a ſhort Account of the Work on which is built this New Method of Inſtitution. The Author in his Scheme has reduc'd all Things or Notions to forty Genus's or common Heads: The firſt ſix of theſe comprehend ſuch Matters, as by reaſon of their Generalneſs, or in ſome other Reſpect, are above all thoſe common Heads of Things, call'd Predicaments: The Reaſon for beginning his Tables in this metaphyſical Manner he gives in theſe Words, "That in the Enumeration of all Things and Notions, thoſe are firſt to be conſidered which are more general or comprehenſive, belonging either to Metaphyſick, or to Grammar and Logick. And that tho' Particulars are firſt in the Order of Being, yet Generals are firſt in the Order of Knowing, becauſe by theſe ſuch Things and Notions as are leſs general, are to be diſtinguiſh'd and defin'd." On which I ſhall make this Remark,

mark, That let the Reaſon for making his Tables of Tranſcendentals the firſt ſix of the forty, be never ſo good, it will be very improper, and indeed ridiculous to begin with them in this New Method; being in many Particulars beyond the Capacity of a Child, and therefore to be poſtpon'd, till an Acquaintance and Familiarity with ſeveral other of the eaſier Tables has prepar'd the Way, and render'd him capable of receiving Inſtruction by theſe more difficult Tables by theſe Schemes harder to be underſtood. The remaining thirty-four belong to the ſeveral Predicaments, of which he reckons only five. Of theſe Subſtance takes in fourteen Genus's, Quantity three, Quality five, Action four, and Relation eight. As to his Tables relating to Subſtance, which contain 130 Pages, and make about half of what he calls the Scientifical Part; I think they are eaſy enough, and may be well underſtood by a Lad of eight or nine Years of tolerable Parts, and forwarded by the Help and Aſſiſtance of a diligent Tutor: So that if thoſe Tables are not read thro', 'tis not on account of any great Difficulty in them, that renders them too hard for the young Student; but becauſe they contain Things that may be thought not very material, and of Conſequence too minute to be particularly and thoroughly conſidered. The three belonging to the Predicament of Quantity, *viz.* Magnitude, Space and Meaſure, are, 'tis own'd, not ſo eaſy; and the Inſtructor will meet with ſome Particulars therein, the Meaning whereof if he can convey to his young Pupil, he will ſhew his Ability and Dexterity, his fitneſs to give Inſtructions, and how well qualified he is to convey Knowledge.

The next five Tables concern Quality, the Genus's belonging to which are natural Power, Habit,

Habit, Manners, ſenſible Quality, and Diſeaſe, with the various Differences and Species under each of theſe, as in the preceding and ſubſequent Tables. Theſe Schemes reach from Page 194 to 225, and explain many Things uſeful to be known; part of this Knowledge young Maſter is capable of, and part thereof is beyond his Underſtanding and above his Reach; ſo that in the uſe of theſe, as indeed of almoſt all the Tables, it will be proper, I may ſay neceſſary for the Preceptor to apply his Judgment, without which this new propos'd Method will not in any degree anſwer what is intended by this Way of Inſtitution.

Next to the Predicament of Quality ſucceeds that of Action; the ſeveral Kinds of which may be diſtributed into ſuch as have for their Agent a Spirit, or ſpiritual Faculty, call'd Spiritual Action. A Body or material Subſtance, reſpecting chiefly either the Actions of animate Bodies, call'd Corporeal Action, Paſſage of animate Bodies from one place to another, ſtil'd Motion. Sundry Heads of Works, about which Men of ſeveral Callings are to employ themſelves, ſtil'd Operation.

Theſe four Genus's take up about four and twenty Pages, and conſiſt of Particulars, ſome more, ſome leſs uſeful and difficult to be known; on which account we muſt here again call on the Tutor to make a juſt Diſtinction, and ſuch a Choice as tends moſt to promote the Improvement of the young Gentleman he is to direct, whom he has taken under his Care, and is in the beſt and moſt advantageous manner to inſtruct.

Relation takes in eight Genus's, three of a more private Nature, namely, 1ſt. Œconomical, or Family Relation, together with the ſeveral Kinds of Things relating to thoſe in that Capacity. As 2dly, Poſſeſſions. Or, 3dly, Proviſions. By Re-

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lation more publick, is included civil Relation, Judicial, Military, Naval, and Eccleſiaſtical. Theſe Genus's, as are moſt of the reſt, are divided into ſix Differences; a Limitation 'tis acknowledged arbitrary, but nevertheleſs convenient, and of uſe. Under each Difference are enumerated the ſeveral Species belonging to that Difference. The Species are commonly joined together by Pairs, for the better helping the Memory. Thoſe Things which naturally have Oppoſites, are joined with them according to ſuch Oppoſition, whether ſingle or double. Thoſe Things that have no Oppoſition are paired together, with reſpect to ſome Affinity which they have one to another.

And what is ſaid of the Species in theſe five laſt Tables is to be underſtood, tho' not particularly expreſs'd, in the ſhort Account I gave of the other thirty five. If but half that is contain'd under this Predicament Relation be made clear to the Underſtanding of the Learner, not a little uſeful Knowledge may thereby be imparted; and thus by the help of theſe, and what he may learn from the former Schemes, will the Underſtanding receive an Improvement beyond what has been found at the Age of twelve, not inferior to what is uſually to be met with at ſixteen. After all, I would not have any one believe that I think this Eſſay of Biſhop *Wilkins*'s compleatly finiſh'd, with all the Advantages ſuch a Work is capable of. 'Tis no eaſy matter to enumerate all kinds of Things and Notions, and it will be no wonder that, upon a ſtrict Examination, ſeveral Things ſhould be found wanting. It muſt be owned, that the Buſineſs of Defining, is, amongſt all others, a Thing the moſt nice and difficult, and that the doing this for all kinds of Things and Notions, in a compleat and exact manner, is a Task too hard

for

for one Man, beyond any ſingle Abilities, and is ſufficient to employ the combin'd Studies, exerciſe the joint Abilities of many Men, even of a College. So that great Allowance is to be made for the many Slips of this ingenious and diligent Author in this knotty part of the Work.

'Tis no Buſineſs of mine to cry up theſe Tables as finiſh'd and in all reſpects perfect, 'tis enough to ſhew, that as imperfect as they are they come up to my Deſign, and that a way of inſtructing Youth, between the Age of Eight and Twelve, preferable to any other Method now in uſe, may, by a learned and judicious Tutor, be thence collected and deriv'd. Not but that the compleating the Tables, to render them more beneficial and uſeful, is a thing to be deſir'd, that merits the Endeavours and Labours of ſuch as approve of, and are willing to promote this part of Education hitherto neglected and here humbly offered and recommended to the Publick. And I take the liberty of propoſing a Way how this may with the leaſt Difficulty be brought about and effected. It may be taken for granted, that thoſe Gentlemen who have inſtructed Youth by theſe Tables for three or four Years (the time propoſed for their thorough Underſtanding ſuch a part of them as ſhall be thought moſt uſeful, moſt ſuited to their Capacity) will by their cloſe Application to this Work, be enabled to make ſeveral very material Amendments now if publick Notice was given by ten or twelve Perſons who had been thus employ'd, that their Alterations ſhould be communicated to a Perſon they approved of, and judg'd qualified, by the help of thoſe Emendations to compleat the Tables; 'tis not improbable but ſome Man of Leiſure and Judgment might be found out willing to take the Pains of making uſe of, and uniting their learned Labours towards finiſhing that Work.

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When I assign three or four Years for the attaining the Knowledge that is to be communicated by the Tables, it can't be deny'd, that in that Space of Time they be thoroughly understood, proper Defalcations being made, what is judged unnecessary, or what appears too difficult therein being omitted. Tho' I supppose the Study of these Tables to be the daily Business of the Young Gentleman, I would not be thought to intend that this should be his whole Employment; an Hour or two each Day will be thought too much by him, and full enough by the Tutor, who will find himself under the necessity of more than ordinary Study and Application of Thought to facilitate the Work, to bring down what is above to the Level of the Child's Capacity, to make that which is of it self difficult, by a proper Explication easy to be understood. I would not have it thought while I am thus earnestly recommending and pressing the use of the Tables, that I have no regard to the Dictionary, that I look on it as a thing unserviceable to the present Propofal, and to be neglected as useless: A frequent use ought to be made of this in conjunction with those: From this should be selected a great number of Words that refer to the Tables, which give themselves upon those References to be turn'd to and consulted. The Dictionary and the Tables should go Hand in Hand, must mutually assist each other, and jointly contribute to the conveying of Knowledge, by giving as well a clear understanding of Words, as just and adequate Notions and Conceptions of Things. And the Instructor must apply to this what *Horace* says of Nature and Art, Study and Wit:

——————Alterius sic
Alter poscit opem Res, & conjurat Amice.

The twelfth Chapter of the ſecond Part of t
Eſſay (which is a general Explication of the T
bles, and contains a few Inſtances for the bett
Guidance and Direction of thoſe who would re
the greater Advantage and Benefit from ther
can't be read too often by the Scholar, can't b
too much conſidered by him, or too deeply in
printed on his Mind; and the Tutor would d
well to enlarge the Numbers of Examples to mak
this explanatory Diſcourſe ſtill more advantag
ous and uſeful. There is one Conſideration o
this Occaſion not to be omitted, that concerns, an
is not unworthy the Notice of the Teacher him
ſelf; as what has an immediate relation to, an
in a peculiar manner belongs to him. That wher
as, according to the common Method of Educ
tion, the Preceptor (when the Learner is of th
Age of one juſt entring on this new Way of I
ſtitution) has Work cut out for him not at a
ſuitable to his Character and Temper; no ways b
fitting a Scholar and a Gentleman; and is emplo
ed in Things in an inferior Nature, vaſtly b
low him; in this Caſe, following this New M
thod, he will not be engaged in mean and trivi
Matters, in unſcholaſtick Occupations, in Wa
low, unprofitable and unentertaining; but in a B
neſs worthy of, beneficial and delightful to him
ſelf; his Ideas of Things will become more cle
and diſtinct; his Skill in Words more accura
and exact; his Mind, as well as his Knowledg
will be enlarged, and his Imagination in no ſm
Degree entertain'd and pleas'd. Thus will he
rewarded for his great Pains, and the extraordina
Labours he is at, will bring its own Recompen
with it; and if his Mind be put upon an unuſu
Strain and Exerciſe, it will receive Advantage
proportion, an anſwerable and unuſual Benef

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This Encouragement he will have to quit the old Path, and ſtrike into a new Road; a Way where he will meet with ſomething ſtill new and agreeable to entertain him; ſomething uſeful to improve him; nothing trifling and below his Notice to diſcompoſe and diſquiet him; in a word, whatever he can deſire, and much more than he can expect, who has taken upon him the humble Task, and is employ'd in that inferior Office of giving Inſtructions to Children.

Our Author having diſpatch'd the ſecond Thing propos'd to be treated of, the Scientifical Part, containing a regular Enumeration and Deſcription of all Things and Notions, proceeds to the Organical Part, or an Enquiry after ſuch kind of Helps, as may aſſiſt us in the forming theſe more ſimple Notions into complex Propoſitions and Diſcourſes, which he calls Grammar, which he treats of, not according to any inſtituted and particular; but philoſophically, and after a manner rational and univerſal; conſidering ſuch Grounds and Rules as naturally and neceſſarily belong to the Philoſophy of Letters and Speech in general; which being on that account to his Purpoſe, and anſwering his Deſign of a real Character, *&c.* he was oblig'd to take a particular and diſtinct View of. What I have to ſay concerning this his natural Grammar, is this, that as to the five laſt Chapters of this Diſcourſe, I think there is little in them to my Purpoſe, and that they may be entirely omitted as unſerviceable to this End. That out of the five firſt, if the Tutor will give himſelf the trouble of making judicious Extracts, he may collect ſome Rules and general Remarks, which would not prove unuſeful to his young Scholar. That as to the ſixth and ſeventh Chapters, treating of Tranſcendential Particles, exhibiting Inſtances of the

great Uſefulneſs of theſe Particles, and Directions how they are to be apply'd; I take the liberty of recommending them to his Attention, and ſerious Study; not examining them as ſubſervient to the Authors, but as conducive to, and promoting this new Method of Inſtruction.

And here I think fit to leave him to himſelf to try his Ability, and make uſe of his own Sagacity, that he may have the Fatigue and Labour, as well as the Benefit and Pleaſure of the Diſcovery. A Child that has gone thro' this Eſſay, and been ſucceſsful in theſe initial and preparatory Studies; that has made himſelf well acquainted with his Mother Tongue; learnt ſome general Rules of Grammar; and attain'd a Degree of Knowledge above his Age; will ſoon adorn the School he enters, will by a ſudden and ſurpriſing Improvement, under the Inſtructions of an able Grammarian, bring Reputation to this Method as well as to his Maſter; learning in a man-like, and not a puerile and childiſh Way; not as other Novices by roat, but as he has been accuſtomed, according to his former Practice, by reaſon—— And if we follow him from the School to the Univerſity, from *Weſtminſter* to *Oxford*, we ſhall find him as apt to receive Academical Learning, with the ſame Facility as he had before receiv'd Grammatical Literature and Claſſical. From Acuteneſs in Diſtinguiſhing, Cloſeneſs in Reaſoning, Certainty and Firmneſs in Infering, he will ſoon commence a Logician, and become Maſter of the ſecond Science; the Stiffneſs of which his firſt Inſtructions will enable him to ſoften, to uſe the Art as a Gentleman, not a ſervile Follower, not with a pedantick Formality, but ſtill artfully, with Exactneſs and Regularity. And when the Mathematician takes him under his Inſtruction,

and

and *Ariſtotle* gives Place to *Euclid*; when he quits the Common Field, and enters Incloſures; when he begins to contract his View, and from Generals deſcends to Particulars; when he confines his Thoughts to, and imploys his Talent in Reaſoning about Magnitude; the two Qualities he brings along with him, Clearneſs and Attention, will ſoon produce a third Earneſtneſs and Intention; by the help whereof he will ſoon paſs thro' the Elements, and be led to *Archimedes* by *Euclid*. In a word, whether Chronology or Hiſtory, natural or moral Philoſophy, Law or Divinity be the Object of his Study, the Imployment of his Thoughts, the Diverſion and Improvement of his Mind; whether he undertakes the Service of his Prince or his Country; whether he ſhines at Court or in Parliament; his Skill in each Art, the Figure he makes in every Station, will ſhew the Advantage of a good Foundation, of an uncommon and philoſophical Education.

I had almoſt forgot one thing, the Inſtructor ought to be advertis'd of, that in this Work there are ſeveral mean and vulgar Words not fit for a Gentleman to uſe or to know; if therefore I may on this Occaſion be allowed to turn Adviſer, I would requeſt the Gentleman who undertakes the Care and Direction of young Perſons, to ſtrike out whatever Words he meets with either in the Tables or Dictionary that come under this Denomination, deſerve Cenſure, and ought to be exterminated and expunged. I own I am a little ſurpriz'd that ſo ingenious and learned a Man as Biſhop *Wilkins*, ſhould be guilty of this Over-ſight, ſhould ſink into this Meanneſs; but give me leave to make this Apology for him, let this be his Excuſe, that the Work he was engag'd in, the Eſſay he was upon, was long and difficult: In which Caſe great Allowance is to be made, and the Candid

did and Ingenuous will not be offended with, nor bear hard upon ſuch a Writer for every ſlight Miſtake, ſuch as the common Frailty of our Nature may excuſe, ſuch as large Volumes are ſeldom free from; remembring that in long Performances Sleep will ſometimes ſurprize: That *Homer* himſelf is not without his Faults, and has been ſometimes obſerv'd to Nod.

I have before given an Hint, that there is not the utmoſt Correctneſs in the Tables, that there is room (as will be found on Examination) for Additions and Emendations; and that tho' they paſs'd the Hands of a careful and exact Writer, they may be render'd ſtill more compleat and perfect. And as it concerns them more particularly who are to make uſe of theſe Tables, that they ſhould be in all Reſpects exact and compleat; it lies upon them, is their proper Buſineſs, by their Study and Skill, to bring about and effect what will render their Labour more uſeful, their Inſtructions of greater Benefit and Advantage. In promoting this Deſign, theſe Gentlemen may very laudably ſpend their Time and Study, taking with them, and obſerving this Caution, That as the Correcting and Amending theſe Tables will prove a Work of no ſmall Difficulty, will require great Care, and all imaginable Exactneſs of Judgment; ſo when they have undertaken this Task, they would not be too forward in making Alterations, which will require their ſecond and third Thoughts, ought to paſs a ſtrict Examination, and be the Effect and Reſult of the moſt ſerious Deliberation; that they may herein proceed on the ſurer Grounds, leſt otherwiſe they ſhould happen to deface what they intended to amend.

As well as I think of this new Method of Inſtruction, others, 'tis likely, will entertain very

different Sentiments about it; ſome without well conſidering and weighing it; ſome perhaps without giving themſelves the Trouble ſo much as to underſtand it; both Sorts out of a good Opinion and over Fondneſs for the Methods generally practiſed, that are in common Uſe. And this Way of Proceeding is agreeable enough to what Men have formerly done on the like Occaſions, to the Backwardneſs there is in moſt to receive any thing new, what does not come recommended to them by the common Vogue. There may be many Inſtances, I doubt not, brought to illuſtrate this, but being unwilling to over-do, I ſhall confine my ſelf to two or three Particulars. No one can deny Logarithms to be an Invention of excellent Art, and exceeding uſeful to facilitate Calculations, by making Addition and Subſtraction to anſwer the End of tedious Multiplications and Diviſions, and yet it was a conſiderable time before Men in other Parts did ſo far take notice of them as to bring them into Uſe. The Art of Short-hand, in its kind, an ingenious Device, and of no ſmall Uſe, applicable to any Language, wonder'd at by Travellers that have ſeen the Experience of it in *England*, was not within ſixty Years after its Invention brought into common Practice in any other Nation. But to bring this home to our ſelves. Sir *Iſaac Newton* (allow'd by all the ableſt Mathematicians of the Age) in the Lectures he read during his Profeſſorſhip at *Cambridge* about ſixty Years ago has given Solutions of ſeveral Problems in an analytical way built on the *Data* of *Euclid*; theſe Demonſtrations are publiſh'd in a Book entitled, *Elementa Arithmeticæ Univerſalis*, a Work well known to be his, tho' his Name is not prefix'd to it; and Judges ſee that maſterly Hand in them, that is viſible in all his Performances:

mances: The ſame Method (of which he was no ſmall Admirer) he follow'd in ſolving ſome Problems in his fifth Section of the firſt Book of his *Principia Mathematica Naturalis Philoſophiæ*, printed in 1687. By the judicious Application of this Analyſis he has made his Proofs moſt elegant, neater than if he had made uſe of common Algebra. Now one would think that the Name of this great Maſter, and the Excellency of his Performances, could not fail of giving Credit and recommending Reaſoning on theſe Principles, this Method of Proving to the World; and that this great Geometer and Analyſt would have had Followers as well as Admirers. But it has happen'd otherwiſe, an over Fondneſs to Algebra (an Art deſervedly eſteem'd) has brought the ancient Analyſis into Diſeſteem; and tho' in ſome Caſes vaſtly preferable, 'tis little regarded, and *Euclid*'s *Data* is become a Book moſt injudiciouſly neglected. So that the only Cauſe of Wonder (in caſe this Thought be not diſregarded) can be this, that ſo mean a Writer ſhould meet with better Reception than the ancient *Greek*,—than the modern Mathematical Philoſopher. I ſhall now make a little Excurſion, and by way of Digreſſion ſay ſomething from our Author relating to Pronunciation; a thing that deſerves the Attention of thoſe who ſpeak in publick, ſuch as would be liſtened to, and heard with Attention. As for the Powers of Letters, they are very uncertain, no ways fix'd and determin'd to the ſame Signification; which, as to our *Engliſh* Pronounciation, may be made to appear by abundance of Inſtances both in the Vowels and the Conſonants; as to the Vowels 'tis generally acknowledged, that each of them have ſeveral Sounds. *Vocales omnes Pluriſonæ*, ſays a learned Writer. They are pronounced, ſays another,

other, *Aliquando tenuius, exitiuſq; nunc craſſius, nunc intermedio ſono.* And I don't know but the Obſervation may be carried ſomething further, and that it may be affirmed, that each Vowel, beſides its own, has the Powers of the other four. As to the Conſonants, theſe likewiſe are of very uncertain Powers. Now, theſe Variations and Differences (whether agreeable to Reaſon or not) are ſo ſettled by a long and general Cuſtom, that every one muſt conform his way of ſpeaking to this Law and Rule of Speech. And on this Occaſion it may be obſerv'd that Men of Reading are in this Print, are not a little faulty, and may deſerve a gentle Admonition; they are too apt to deliver themſelves, and be govern'd by the way of Spelling, and not according to the uſual Manner of pronouncing. The reaſon of which Miſtake ſeems to be this, that they follow their Eye more than their Ear; in this Caſe a bad, becauſe a falſe Guide; when 'tis conſidered that the Words whoſe Sounds do diſagree with their Way of Writing, are vaſtly numerous, and make a conſiderable part of our Language. And without any Complement to the Women, I may venture to ſay, that in the Point of Reading they have the Advantage of Men, they offend the leaſt againſt Cuſtom; their Ear, herein the ſureſt Director, is what governs their Speech, by this Means render'd Eaſy, Natural and Agreeable. Whoever has frequented publick Aſſemblies, heard Speeches in the Upper or Lower Houſe of Parliament, obſerv'd how much a well worded Oration has been diſparag'd by a bad Delivery, and how much an inartificial and empty Harangue has been ſet off by an handſome way of Speaking, will not think good Pronounciation, a Matter below the Notice, unworthy the Care, no mean Accompliſhment of a Scholar, a Gen le-

man, and what those two Characters constitute, an Orator.

Whilst I was drawing up this Discourse a Fancy came in my Mind, that the Character it self, tho' it could no ways answer the Author's Design, might be made serviceable to another Purpose, and was not on that account to be laid aside as a Thing entirely insignificant and useless. This Thought is not for the Use of Children, but propos'd to Gentlemen of the University, who are the proper Persons to receive Benefit from it, which can be only rendered useful by the help of Learning and Knowledge: I will first transcribe a Passage from the Bishop's Dedication as an Introduction to what I have to offer on this Head. This Design will contribute much to the clearing of some of our Modern Differences in Religion, by unmasking many wild Errors, that shelter themselves under the Disguise of affected Phrases; which being philosophically unfolded, and render'd according to the genuine and natural import of Words, will appear to be Inconsistencies and Contradictions. And several of those pretended Mysteries and profound Notions, expressed in great swelling Words, whereby some Men set up for Reputation, being this way examin'd, will appear to be either Nonsense, or very flat and jejune. And tho' it should be of no other Use but this, yet were it in these Days well worth a Man's Pains and Study, considering the common Mischief that is done, and the many Impostures and Cheats that are put upon Men under the Disguises, and by the sophistical Use of Words. Let it be observed that this Character has a reference to the Nature of Things, and that common Notion of them wherein Mankind does agree; that the End of it is the Expression of

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our Conceptions by Marks which ſignify not Words but Things. 'Tis next to be conſider'd, that when Words were firſt learnt, in our Infancy, a great part of them were imprinted on the Memory without Notions; the reſt with Ideas very confus'd and indiſtinct; and that by this Means a Foundation has been laid for Error and Miſtakes in abundance; which muſt be acknowledged, more or leſs, affect all Men; and from which the utmoſt Labour and Study has not been able wholly to free them, ſeveral being undiſcoverable by the Mind ſeeing them through a Miſt and Cloud of Words. It were therefore to be wiſhed, that ſome Method could be found out that might enable them to abſtract, to ſeparate Words from Things, to excite Ideas in the Imagination as much as poſſible, unmask'd and diſengaged from their Names; in order to frame our Notions agreeable to the Nature of Things, that our Conceptions may become juſt; that is, clear, diſtinct, and determinate. To this End I beg leave to propoſe (till ſome better Method can be diſcovered) to Gentlemen of Speculation and Learning, as no improper Means, this real Character of Bishop Wilkins. The ingenious Author fancies the Learning of this ſo eaſy a Work, that it might be attain'd in a Month's time; herein 'tis not unlikely he is miſtaken, as moſt Men are apt to be when they paſs their Judgment upon the Eaſineſs of what they thoroughly underſtand, and are perfect Maſters of. I ſhould rather think it would take two or three Months for one of Capacity and Memory, ſo to underſtand it as to be able to expreſs his Mind by this Character with tolerable Eaſe and Readineſs. If it ſhall however appear a fit Means to rectify our Notions, by giving us a clear

and naked Repreſentation of Things; they who put a juſt Value on Truth, will not think the Time thus ſpent, loſt, or unuſefully employ'd. Now, that this Character may prove beneficial and uſeful, I am induced to think when I conſider, that in Arithmetical Operations, there is an abſolute Neceſſity to make uſe of Characters (for ſuch I may properly call the *Greek*, the *Roman*, and the preſent way of Notation) without which the Art of Numbers could never in any tolerable Degree have been underſtood. And becauſe the Satisfaction a Man gives himſelf is moſt agreeable and convincing; I would adviſe any one who doubts of the Neceſſity of Characters in Arithmetick, to try his Skill and Dexterity, and ſee whether he can divide or multiply large Numbers expreſs'd (not in the common way by Figures or Characters) but by Words: One or two Trials of this kind will give the moſt ſcrupulous Perſon ample Satisfaction, that had there been no other way of ſetting down Numbers but by Words, Arithmetick would not have made that Figure in the World it does at preſent; been in that univerſal Eſteem for its Uſefulneſs which it now bears; would never have been numbred among the Liberal Sciences. And I leave it to Conſideration whether the Clearneſs and Evidence in Mathematical Demonſtrations by which the Mind is convinc'd, and with which 'tis ſo greatly delighted; does not partly ariſe from, and is in ſome meaſure owing to the Paucity of Words us'd in that way of Proving (by References as in this way of expreſſing the Mind by a real Character) to the Art of raiſing and exciting Ideas unincumbered, not clouded by a Number and Multiplicity of Words. And 'tis not altogether unworthy our Notice, that the cloſe Application, the very Intention

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of Mind neceſſary to enable a Man to expreſs himſelf well by this Character, will not a little contribute to that Clearneſs which is the beſt Preſervative againſt Errors, the ſureſt Guide to Truth. By what I have ſaid to recommend the Learning and Practice of this Character, I would not be thought to intend that this ſort of Study ſhould take up much of the Time and Thoughts of thoſe who are employ'd on a great variety of Matter, in a continued Progreſs towards new and freſh Objects, worthy their Purſuit; more eagerly to be deſir'd; more diligently and aſſiduouſly to be labour'd for; but by way of Amuſement and Diverſion to be put in Practice now and then, to be at times and occaſionally, by way of Change and Variety, an Exerciſe of their Parts and Learning, in a ſpeculative and philoſophick, and at the ſame time no unuſeful Way, no ways unbecoming a Scholar, a Man of Knowledge to be engag'd in.

But to return to, and ſpeak a word or two more of the Tables. In the fourth, fifth and ſixth Chapters of the ſecond Book of this Eſſay, where our Author treats of Vegetables, under the Name of Herbs, Shrubs, and Trees: Of Animals, under the Name of exanguious Animals, Fiſhes, Birds, and Beaſts; and of the Parts of animate Bodies, more peculiar, and more general: He is more than ordinary particular, and has hereupon imploy'd about an hundred and fifteen Pages, where a leſs Number might have been ſufficient. Now in Excuſe for his over Minuteneſs in theſe Tables, which may be thought redundant, it may be urg'd, that the Biſhop being a Virtuoſo, and fond of thoſe Parts of Knowledge that thoſe Gentlemen commonly buſy themſelves about, and the Work it ſelf being addreſt to the Preſident and Fellows of the Royal Society:

Society: He might be too apt to indulge his Fancy, to gratify himſelf in purſuing his beloved Study; and being got into thoſe immenſe Fields of Contemplation, might be tempted to wander and expatiate upon thoſe Subjects which would be no leſs agreeable to the Gentlemen of the Society than to himſelf. But our young Gentleman, who 'tis ſuppoſed to be deſigned for higher and more uſeful Attainments, is not obliged to follow the Reverend Author through theſe long and tedious Tables: As he is not to be a Botaniſt, he has no occaſion to trouble himſelf about getting a very exact and particular Knowledge of thoſe numerous kinds of Plants, which thoſe that are moſt vers'd in the Study of them, are under ſome Difficulty even fully to enumerate. And as he is not to write of Fiſhes, Birds and Beaſts, it belongs not to him to enquire after, and underſtand the ſeveral Species of Animals; and tho' Mr. *Willoughby*, in order to improve himſelf in, and advance that part of Knowledge, might think it worth his while to travel through the moſt conſiderable Parts of *Europe*, to add to the ingenious Obſervations of other learned Authors thoſe of his own; yet, if I was to adviſe, I would not have our young Scholar ſpend ſo much Time as to traverſe the Tables owing to the Labours of that inquiſitive Traveller. And of the hundred and fifteen Pages, let him content himſelf with reading about fifty. On the other hand, where there is a Deficiency in the Tables, it will deſerve the Study of the Tutor, for the Benefit of his Pupil, to add what is wanting, and ſupply theſe Defects.

As I have in this Diſcourſe a conſtant Eye to the Biſhop's Eſſay, and make frequent References to it, they who are Strangers to the Work, will complain of the Obſcurity of this; and I may be blam'd

blam'd by these Men for what they'll call an unintelligible way of Writing: To such I shall only say this, that in giving account of a Folio of above six hundred Pages in an Octavo Pamphlet of thirty one, this could not be avoided. If indeed instead of referring my Reader to what is in Print, I had sent my Reader to some un-come-at-able MS. I had then laid my self open to *Hubibras*'s witty Censure,

In Western Clime there is a Town
To those that live therein well known.

FINIS.